

AMENDMENTS TO THE SPECIFICATION

Please amend the paragraphs found on p.3:42 to p.4:18 as follows:

Generation of new catalytic activities in the novel method means that the enzymes having been subjected to the method are able to convert substrates which they were previously unable to convert, because the affinity of the enzyme for the substrate was too low (i.e., high K_M) and/or the rate of conversion (k_{cat}) too low (i.e., = high K_M) and/or the rate of conversion (= k_{cat}) of the enzymes was too low. In these cases, the ratio k_{cat}/K_M is zero or almost zero, i.e., catalysis does not occur. The generation of a new catalytic activity reduces the K_M or increases the k_{cat} , or both. A catalytic reaction occurs. The enzyme converts the new substrate after the mutagenesis.

It is possible in principle for new catalytic activities to be generated in all enzymes, and preferably new catalytic activities are generated in hydrolases in the novel method. Hydrolases form the 3rd class of enzyme (i.e., 3.-.-) (~~←3.-~~) in the IUB nomenclature system. Hydrolases are preferred in the novel method because, as a rule, a simple detection reaction for them exists and, in many cases, they are used in industrial syntheses. It is particularly preferred to generate new enzymatic activities in hydrolases selected from the group consisting of proteases, lipases, phospholipases, esterases, phosphatases, amidases, nitrilases, ether hydrolases, peroxidases and glycosidases, very particularly preferably lipases, esterases, nitrilases or phytases.

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